

NAME

nextafter, **nextafterf**, **nextafterl**, **nexttoward**, **nexttowardf**, **nexttowardl** - next representable value

LIBRARY

Math Library (libm, -lm)

SYNOPSIS

#include <math.h>

double

nextafter(*double x, double y*);

float

nextafterf(*float x, float y*);

long double

nextafterl(*long double x, long double y*);

double

nexttoward(*double x, long double y*);

float

nexttowardf(*float x, long double y*);

long double

nexttowardl(*long double x, long double y*);

DESCRIPTION

These functions return the next machine representable number from *x* in direction *y*.

SEE ALSO

ieee(3), math(3)

STANDARDS

The **nextafter**(), **nextafterf**(), **nextafterl**(), **nexttoward**(), **nexttowardf**(), and **nexttowardl**() routines conform to ISO/IEC 9899:1999 ("ISO C99"). They implement the Nextafter function recommended by IEEE Std 754-1985, with the extension that **nextafter**(+0.0, -0.0) returns -0.0, and **nextafter**(-0.0, +0.0) returns +0.0.

HISTORY

The **nextafter()** function appeared in 4.3BSD, and **nextafterf()** appeared in FreeBSD 2.0.